

Appendix 'A'

Overview

1. Background and Rationale for the Council's Involvement

The term 'land transport' means¹:

- i) Transport on land by any means*
- ii) The infrastructure, goods and services facilitating that transport, and*
- iii) Includes coastal shipping (including transport by means of harbour ferries, or ferries or barges on rivers or lakes)"*

The reason why the Council is engaged in the activity is:

- a) Because the provision of an integrated, safe, responsive and sustainable land transport system is a fundamental requirement for every District; and
- b) Because the Council is the road controlling authority under the Local Government Act 1974, with responsibility for all of the local roads in the area.

The activities that the Southland District Council undertakes on its roading network are required to fit within the Regional Transport Strategy (RTS), which in turn is required to comply with the New Zealand Transportation Strategy (NZTS) and Government Policy Statement (GPS).

This Plan has been developed in an attempt to comply with these requirements and to be consistent with the Southland Regional Land Transport Strategy and Council's Roding Policy. The Plan generally conforms with the targets of the August 2008 GPS but the Government are reviewing this at present and changes required as a result of this review will be incorporated into the final document (if necessary). One item added to cover the NZTS expectations is an amount to develop a strategy to comply more fully with the active transport and public transport expectations.

Due to the development time involved in pulling this Southland District Council Land Transport Activity Management Plan together and the concurrent development of some of the other documents above, the Plan can only attempt to comply as fully as possible based on the knowledge at the time of writing the Plan. The final version of the Plan will need to be reviewed and refined where needed for consistency against these other documents.

For the purposes of this Southland District Council plan the activities related to rail transport have not been covered as Southland District Council have no involvement or influence over them.

The development and updating of this Plan, which has taken the 2006 Plan and revised all critical aspects to bring them up to date and to incorporate various improvements of to the 2006 Plan, has involved a major team effort of staff from both SDC and MWH (including Roding Engineers, Asset Management Specialists and Risk Specialists). Much of the drafting work has been carried out by MWH staff with input and review from SDC staff and in particular the Asset Manager Roding, who has approved the various drafts before they are passed on to Council.

¹ Reference: Section 2, Land Transport Management Act 2003.

The full Plan has been peer reviewed by an independent specialist. Major Council involvement has included:

- August 2008 APAC meeting discussion on Engineering Standards.
- 29 October 2008 APAC meeting and feedback on initial draft of most of the critical aspects of the Plan.
- 26 November 2008 Council meeting, submission of modified and enhanced draft for feedback and adoption if acceptable to Council.
- 16 April 2009 Council meeting, adopting the LTCCP incorporating information from this Plan.

Appendix A of the Plan provides an overview only and therefore does not delve deeply into any aspects or sub aspects of the roading network.

2. The Southland Road Network Described

The roading network that the Council manages comprises all of the roads, streets and bridges within the District, except the State Highways (which are owned and managed by NZTA) and National Park roads (which are own and managed by the Department of Conservation).

Footpaths are also covered in the Plan. These are owned by the Council but managed by Community Boards. Table A.1 illustrates the 'size' of the activity.

Table A.1 Description of the Land Transport Network (as at 30 June 2008)

Population Served (2006 Census)	28,440
Length of:	
a) Roads – Sealed (km)	1,959
– Unsealed (km)	3,002
Total (km)	4,961*
b) Footpaths (km)	191
c) Bridges (no.)	860
d) Stock Underpasses (no.)	138
e) Street Lights (no.)	2,416
f) Estimated Distance Travelled on the Network Each Year (million kms)	228
g) Book Value 2008 (\$m) including land value	1,107*

The Council 'owns'² all of these roads, and they are managed in nine separate groups.

*Length of network includes bridges

Table A.2 describes the groups, and shows the length of roads in each.

² Pursuant to the provisions of Part XX of the Local Government Act 1974, the ownership of all local roads is vested in the territorial local authority.

Table A.2 Roads in Hierarchical Order – Length (km)

ARAMP Group	Central Area	NW Area	SE Area	Joint Bdy Rds Maintained by others	Totals
Group 1 ADT 800+	41.4	9.7	45.9	0.0	97.0
Group 2 ADT 400-799	118.3	143.7	125.1	6.3	393.4
Group 3 ADT 200-399	194.6	101.2	142.2	2.1	440.1
Group 4 ADT 50-199	435.6	366.9	172.1	2.5	977.1
Group 5 ADT 0-49	24.8	12.4	13.2	1.3	51.8
Sealed Roads Sub Totals	814.7	633.9	498.6	12.2	1959.3
Group 7 ADT 80+	73.8	97.3	85.5	0.0	256.6
Group 8 ADT 20-79	625.7	528.2	528.4	11.0	1693.3
Group 9 ADT 0-19	331.9	381.6	298.3	14.4	1026.2
Group 10 Tracks	5.7	13.3	6.9	0.0	25.9
Unsealed Roads Sub Totals	1037.2	1020.3	919.2	25.4	3002.1
Totals	1851.9	1654.2	1417.8	37.6	4961.4

ADT – Average Daily Traffic

The above road groups are based on the groupings amended since the development of the previous Plan. There is ongoing review of the road groupings taking place which will amend these numbers over time. They modify the previous figures by taking into account the latest modified traffic counts (which increase counts for roads with higher proportions of heavy vehicles). They also allow to increase the road grouping by one if the road is a recognised tourist route.

The modification factors are demonstrated in Table A.3 below which shows the demands on the roading network.

Table A.3 Demand on the Road Network

Demand	Service Demand Category	Level of Service Adjustment Factors		
		Traffic Volume Adjustment Factor	Minimum Road Grouping	Specialist Facility
Traffic volume	All functions	Traffic estimate		
Produce to Market	Milk, meat, wool, timber, grain, coal, livestock	Adjust traffic estimate times [1+ %HCVs less 9% times 0.033]		
Industry	Freezing works, farm services, timber processing, milk processing, quarries, lime, phosphate	Adjust traffic estimate times [1+ %HCVs less 9% times 0.033]		
Social	School buses, emergency services, community events, mail, recreational access	Allow estimated minimum 8 vpd per rapid address	80% of SDC roads are covered by school bus routes, therefore considered an ordinary demand on the network.	

Demand	Service Demand Category	Level of Service Adjustment Factors		
		Traffic Volume Adjustment Factor	Minimum Road Grouping	Specialist Facility
High Seasonal Use	Recreational use, short processing season			Response times to be increased during peak period in line with seasonal traffic volume.
Tourism	Buses, Rental Cars, Camper vans		Promote to next group all roads included on designated tourist routes & features*	Route signage on designated tourist routes
Pedestrian	School access, recreational walking			Footpath provided at trigger level
Cycling	Tourists, recreational biking			Cycle lane provided at trigger level
Parking	Commercial access, social events			Parking lanes provided at trigger level

* Designated tourist routes include Scenic Routes and their noted features/highlights.

The criteria that is followed for the allocation of each road to a particular group is:

Group 1 (97km, 2.0%)

Group 1 roads are sealed roads that primarily form the main traffic routes through and between the urban zones of the District, and provide connections to adjacent Districts.

These roads are primarily rural arterial roads being of District or Regional significance.

The average daily traffic on a Group 1 road is generally in excess of 800 vehicles per day.

Group 2 (393km, 7.9%)

[Note – Rural G1 and G2 roads have been combined in terms of the Engineering Standards applied to them]

Group 2 roads are sealed roads that form the secondary framework of roads, which collect and distribute traffic to and from the Group 1 roads.

These roads are a mix of rural arterial, collector and local roads with average daily traffic generally between 400 and 800 vehicles per day.

Group 3 (440km, 8.9%)

Group 3 roads are sealed roads that have a more local function and ensure that the traffic and access functions are in balance.

Group 3 roads are primarily a mix of urban and rural local roads carrying between 200 and 400 vehicles per day.

Their role is to connect traffic-generating activities with the Group 1 and 2 network.

Group 4 (977km, 19.7%)

Group 4 roads are sealed roads that are generally residential streets in urban or rural zones, with connections at each end, but mostly used as access providers.

The pedestrian and residential amenity functions of these roads predominates in residential areas and they are not intended to provide access for high traffic-generating non-residential activities.

They are generally local roads with less than 20 properties, carrying between 50 and 200 vehicles per day.

Group 5 (52km, 1.0%)

Group 5 roads are minor sealed local roads that include the less popular sections of busier sealed roads and sealed sections of gravel roads.

These roads generally provide access to less than five properties, and have an average daily traffic of less than 50 vehicles per day.

Group 6

This category is currently not used.

Group 7 (257km, 5.2%)

Group 7 roads are the highest demand unsealed roads within the network that form the secondary framework of roads, which primarily collect and distribute traffic to and from Group 1 and 2 roads.

All urban unsealed roads and the unsealed sections of the Southern Scenic Route and the Catlins Heritage Trail are part of this category.

These roads are primarily local roads with at least a portion of the road carrying greater than 80 vehicles per day.

Group 8 (1,693km, 34.1%)

Group 8 roads are unsealed rural roads that provide both direct access to abutting properties in rural areas and a through traffic function.

The unsealed accesses to Southern Scenic Route and the Catlins Heritage Trail attractions are part of this category.

These roads are primarily local roads carrying between 20 and 80 vehicles per day.

Group 9 (1,026, 20.7%)

Group 9 roads are minor unsealed roads that provide direct access to no more than two or three residences and have no noted through traffic function.

A significant proportion are no exit roads and / or have no residencies.

These roads are local roads carrying less than 20 vehicles per day.

Group 10(26km, 0.5%)

Group 10 roads are unsealed rural roads that have been categorised as 'dirt roads'. They are without residences and are mainly used as seasonal recreational access to recreational activities.

These roads are not categorised by traffic volume and are included in the maintained roading network on a case specific basis.

3. Hierarchy Review

At the APAC Committee meeting in August 2008, the potential to reintroduce a roading hierarchy to run in parallel with the road groups was agreed.

This would provide a system that encompasses not only demand adjusted traffic volumes but the function of the road and its importance for the regional and local economy of the district and/or area. The suggested hierarchy to consider for future adoption is as follows:

- Strategic Roads (Including State Highways)
- Arterial Roads (could be broken into Regional Arterials such as the Southern Scenic Route and other District Arterials)
- Collector Roads
- Local Roads.

This hierarchy of roads could then be assessed by factors such as:

- Function or purpose of the road (does it serve a tourist area or significant industry)
- Traffic volume and composition (does it have a high proportion of heavy vehicles)
- Adjacent land use (Dairying, forestry, rural residential, national park etc)
- Number of properties the road serves
- Speed environment
- Terrain.

It was suggested that the hierarchy could be modified to combine hierarchy with the road groups, as follows:

Arterial	1
Arterial	2
Arterial	3
Arterial	4
Collector	1
Collector	2
Collector	3
Collector	4
Collector	7
Collector	8
Local	1
Local	2
Local	3
Local	4

Local	5
Local	7
Local	8
Local	9
Local	10

This will allow for a future exercise of reviewing the hierarchy to modify priorities for particular purposes, ie specific heavy vehicle routes designated to carry 50 T loads, or priority lifeline routes. While road widths may remain the same for an Arterial 1 and a Local 1, the arterial may have a higher level of reliability, strength or delineation due to the type of use the road will be put to.

Development and adoption of this system will also allow for greater consistency with the requirements of the District Plan. It may also allow for the resolution of a number of extent of network issues.

4. Footpath Network

Alongside the roading network the District has a network of footpaths in the urban areas which are detailed in Table A.4.

Table A.4 Footpath Network (as recorded at 30 June 2008)

Town	Asphaltic Concrete		Concrete		Dense Graded Emulsion Mix		Interlocking blocks		Metal		Seal		Other		Totals	
	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m
ATHOL															0	0
BALFOUR			4,616	2,732			7	3							4,623	2,735
BROWNS	291	107							894	445					1,184	552
COLAC BAY	2,047	834	942	707											2,989	1,541
CURIO BAY															0	0
DIPTON															0	0
DRUMMOND															0	0
EDENDALE	1,707	841	13,629	6,876					1,852	1,060					17,188	8,777
FORTROSE															0	0
GARSTON															0	0
GORGE ROAD	215	122	126	60					299	199					639	381
LIME HILLS															0	0
LUMSDEN	2,077	777	3,905	1,946					1,474	638					7,456	3,361
MAKAREWA WORKS*															0	0
MANAPOURI	180	136	7,396	5,186					3,489	2,587					11,065	7,909
MONOWAI															0	0
MOSSBURN	325	165	5,047	3,383					136	66					5,509	3,614
NIGHTCAPS	70	34	8,098	4,146					1,182	372					9,351	4,552
OHAI	36	21	9,784	5,557							147	85			9,968	5,663
ORAWIA															0	0
OREPUKI	897	297	695	617											1,593	914
OTAUTAU	3,266	1,721	17,301	9,256			228	69	572	402					21,368	11,448
RIVERSDALE	724	319	4,350	2,523					127	66					5,200	2,908
RIVERTON	5,453	1,976	16,971	12,975			16	5	6,750	4,919	1,572	625	286	148	31,048	20,648
RURAL	2,494	1,038	2,802	1,997					1,801	647					7,096	3,682
STEWART ISLAND			462	339			1,194	598	122	112	298	232			2,076	1,281
TE ANAU	14,006	7,712	70,619	42,761			12,330	6,049	217	115					97,172	56,637

Town	Asphaltic Concrete		Concrete		Dense Graded Emulsion Mix		Interlocking blocks		Metal		Seal		Other		Totals	
	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m	m2	m
THORNBURY			1,250	833											1,250	833
TOKANUI	623	324	39	13					1,054	460	1,062	470			2,777	1,267
TUATAPERE	1,713	533	13,192	8,136			24	8	868	291	567	151			16,363	9,119
WAIANIWA			300	100											300	100
WAIKAIA			850	367							291	101			1,141	468
WAIKAWA									71	59					71	59
WAIMAHAKA															0	0
WAIRIO															0	0
WALLACETOWN	705	232	2,223	1,289											2,928	1,521
WINTON	25,162	11,342	6,167	3,068	4,746	2,266	524	147	25,288	11,480	3,231	1,429			65,117	29,732
WOODLANDS	286	175	366	188					1,247	553	360	90			2,259	1,006
WYNDHAM	7,199	2,923	15,342	7,429					368	201	249	113			23,158	10,666
Totals	69,475	31,629	206,472	122,484	4,746	2,266	14,324	6,879	47,810	24,672	7,776	3,296	286	148	350,888	191,374

5. The Activity Goal, Principal Objectives, and Level of Service

The Council has two principal land transport responsibilities:

- a) To act as service provider for the roading network (including Active Transport and Passenger Transport); and
- b) To work with NZTA and the New Zealand Police and others regarding the safe use of roads.

In order to ensure that it is able to carry out these responsibilities in the most effective and efficient manner, a lot of work has been done to define what the land transport goal and principal objectives (and what the Council's strategic approach for achievement of them) should be. As a result of:

- a) the extensive public consultation that has taken place over the years, including the feedback received:
 - i) In response to Annual Plans;
 - ii) From sessions that were held around the District to discuss future levels of service during 2005; and

- b) The feedback received by way of the requests and complaints that are continuously being received, plus

Taking into account the forward planning that is constantly being done (often in consultation with the affected and / or interested parties at the various stages in the decision-making process), the Council believes that the following summarises the main things that the ratepayers and residents expect it to be doing.

- a) **Goal**

That the Council:

Will plan, provide, maintain, develop and improve a roading network that enables people to move, and goods to be moved:

- Conveniently;
- Comfortable;
- Safely; and
- Efficiently.

- b) **Principal Objectives**

That the Council's principal objectives in its effort to achieve this goal will be:

- i) To provide a quality service;
- ii) To ensure that the roads are adequately maintained – so that their service capacity and long-term integrity is not reduced;
- iii) To properly anticipate the time when it may be necessary to extend or upgrade existing roads, or build new roads – and to plan and provide for the identified future needs accordingly;

iv) To have a **sound management** regime for all matters relating to the provision of an appropriate, effective, **sustainable**, thoroughly integrated, land transport network for the District.

c) Levels of Service

Expressed more precisely, the ratepayers and residents have indicated to the Council that they expect it to be concentrating on the following:

- i) Maintain the assets so as to achieve the least whole of life cost;
- ii) Renew the assets at the optimal time;
- iii) Upgrade the roads to current standards when it is economical to do so;
- iv) Ensure that all subdivision roads are constructed to Council standards;
- v) Maintain an efficient arterial network;
- vi) Improve road user safety by education, engineering and appropriate enforcement;
- vii) Plan for localised expansion;
- viii) Manage the network so that it operates safely and efficiently, and
- ix) Maximise the amount of subsidy that is available from NZTA.

6. Strategic Approach

The strategic approach to this activity is:

- To maintain existing assets so as to achieve the least whole of life cost;
- To renew existing assets at the optimal time;
- To upgrade existing roads to current standards when economical to do so;
- To ensure that all subdivision roads are constructed to Council standards;
- To maintain an efficient arterial network which is responsive to changing use patterns;
- To improve the safety of the road user by education, engineering and appropriate enforcement;
- To plan for localised expansion;
- To manage the network so that it operates safely and efficiently; (including after weather events) and
- To maximise the amount of NZTA subsidy available.

Council's Roding department, comprising Asset Manager Roding, Roding Manager and Road Engineer, provides asset management services for this activity with support from the Area Engineer's business unit and consultants. All physical work is executed by contract.

Maintenance practices are targeted at achieving lowest whole of life costs. Staff and contractors are encouraged to seek innovative ways of working and to adapt work methods to incorporate new techniques or

materials. The Safety Management strategy brings together all safety related standards and procedures in a ready reference document for staff.

Close liaison is maintained with NZTA and adjacent local authorities relating to transportation issues to ensure an integrated approach. There is a Memorandum of Understanding with NZTA and shared services agreements with the TLAs.

Council is now required through the updated New Zealand Transportation Strategy (NZTS) and Government Policy Statement (GPS) to develop and submit its programmes through the Regional Transport Committee. These programmes are required to comply with the NZTS and GPS.

This Plan has been developed to comply with these requirements and to be consistent with the Southland Regional Land Transport Strategy and Council Roading Policy.

Due to the development time involved in pulling this Southland District Council Land Transport Activity Management Plan together and the concurrent development of some of the other documents above, the Plan can only attempt to comply as fully as possible based on the knowledge at the time of writing the Plan. In future the Plan will need to be reviewed for consistency against these other documents.

7. Community Outcomes to which the Land Transport Activity Primarily Contributes

The community outcomes to which the land transport activity primarily contributes (and how it contributes) are shown in Table A.4. Further details of contributions to all outcomes are shown in Table 1 of Appendix B Attachment A.

Table A.4 Community Outcomes to Which the Land Transport Activity Primarily Contributes

Community Outcome(s)	How the Land Transport Activity Contributes
<p>Outcome 2 A diverse economy built from our strengths, for growth and prosperity.</p> <p>2.1 We have quality infrastructure with potential for growth.</p>	<p>a) By providing people with access to their land, homes, schools, social centres and recreational areas.</p> <p>b) By providing a corridor for the efficient movement of goods and services.</p> <p>c) Roads are essential for economic development, for social well-being, and for the sustainability of other activities.</p>
<p>Outcome 3 Safe places in a caring society that is free from crime.</p> <p>3.1 We have safe roads.</p>	<p>d) Helping achieve an integrated, safe, responsive and sustainable land transport system.</p>

8. Ranking of Roading Works

Full details on the information gathered and used to rank projects are contained in Appendix W, with renewals information detailed in Appendix F.

Essentially the vast bulk of the work carried out on Southland District Council roads is required to maintain or renew existing roading assets to continue to provide the levels of service desired by the community and to preserve the asset in the most cost effective manner.

Programmes are developed for major renewals works (pavement rehabilitation and reseals) based on carrying out the work which provides the best return on the investment in terms of the greatest savings in long term maintenance requirements. These are expressed in terms of Net Present Value (NPV) which compares the cost of carrying out the proposed work now with the alternative of not doing the work and needing to spend more on maintenance over the next 25 to 30 years. The future costs are discounted, to take account of the value of delaying expenditure into the future, which gives an overall NPV.

Not all projects that have a positive NPV can be funded, so the projects to be carried out are generally prioritised on the basis of those which have the highest NPV.

Once programmed for work the section of road is treated differently in the lead up to the work and after the work, based on the Council's Maintenance Intervention Strategy (MIS). This is designed to run the network as effectively as possible and includes such issues as minimal holding treatments prior to a rehabilitation and pre reseal treatments prior to a reseal.

Bridge renewals are based on determining when individual structures have reached the end of their economic and safe life. At that point an assessment is made on what the best option for the bridge site is ranging from closing the bridge, replacing with a ford, reconstruction reusing the material which is still satisfactory or replacement with a new bridge. A wide range of factors are taken into account in reaching these decisions.

9. Review

This Plan explains the land transport services that the Council is planning to provide for the District over the next ten years – and how they are intended to be programmed and funded.

The main focus of the analysis is the first three years. Beyond that, the work programmes are generally based on past trends and predictions, and should be taken as an outline only. All expenditure is based on estimated costs as at 1 July 2008.

The plan will be continuously refined and updated, and will be comprehensively reviewed no later than December 2011.

10. Issues

- There are, within the District, a large number of rural unsealed roads, and the possible closure and sale of some of those that carry very few vehicles, to the owners of the properties concerned, is a matter that

has been raised from time to time. However, whilst individual situations will be considered on a case-by-case basis, the Council has no plans to do this, as a matter of general policy, at this stage.

- There are also a number of sealed roads which carry a very limited amount of traffic. Should constraints on the budget become too great there is the potential to convert some of these back to gravel instead of carrying out major expenditure like pavement rehabilitation or even possibly a reseal.
- A hierarchy system needs to be developed to ensure consistency across how different roads are used and fit with the District Plan, including how to deal with 50T routes.
- Check consistency of Southland District Council Land Transport Activity Management Plan against Regional Land Transport Strategy, Government Policy Statement and New Zealand Transport Strategy.

11. Future Action and Improvements

Schedule Future Improvement Priorities

Ref. No.	Item	Appendix Relative Urgency						Comments
		1	2	3	4	5	6	
A1	Monitor roads for potential closure/sale on case by case basis					✓		Based on extent of network. Item to be wrapped into item R22 of Improvement Plan.
A2	The full review of road groups needs to be completed and reported in future plan updates					✓		Review completed as part of 2006 Plan. Leave road groupings as they are unless something substantially wrong pops up.
A3	A hierarchy system needs to be developed to ensure consistency across how different roads are used and fit with the District Plan, including how to deal with 50T routes					✓		Item to be wrapped into item R22 of Improvement Plan.
A4	Check consistency of Southland District Council Land Transport Activity Management Plan against Regional Land Transport Strategy, Government Policy Statement and New Zealand Transport Strategy					✓		To carry out review prior to 30 June 2009.
A5	Consider / develop list of roads which may not be economical to maintain as sealed roads in the future					✓		This item is covered by items B2 and R22 in the Improvement Plan.

Key:

- 1 = Extremely urgent (needs to be addressed now)
- 2 = Very urgent
- 3 = Urgent
- 4 = Reasonably or fairly urgent
- 5 = Not urgent
- 6 = A good idea for some time in the future

